

EXHIBIT 2

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

MICHIGAN STATE A. PHILIP
RANDOLPH INSTITUTE,
COMMON CAUSE, MARY
LANSDOWN, ERIN COMARTIN
and DION WILLIAMS,
Plaintiffs,

No. 2:16-cv-11844

HON. GERSHWIN A. DRAIN

v
RUTH JOHNSON, in her official
Capacity as Michigan Secretary of
State,
Defendant

_____ /

Expert Report
Effects of Straight Ticket Voting Removal
Jason M. Roberts
June 30, 2017

I. Summary of Opinions

I have studied the causes and consequences of ballot design changes for several years. U.S. history is replete with examples of majority parties seeking to design a ballot that enhances their party's prospects for electoral success. One way to affect elections is by adding or removing the straight ticket voting option or party box to a ballot. The absence of a straight ticket voting option has been shown to have two major effects on election outcomes: (1) an increase in ballot rolloff or dropoff and (2) longer lines at polling places that deter voter participation in current and future elections. Removing the straight ticket option from the ballot increases the time and physical effort required to cast a ballot for many citizens of a state. Political science research has consistently shown that raising the costs of voting has a deterrent effect on voter turnout and on ballot completion.

These effects have been on clear display in North Carolina where the straight ticket option was removed prior to the 2014 election. North Carolina has conducted two general elections without the straight ticket voting option and the effects are clear: (1) the level of ballot rolloff has increased in counties that previously had high levels of straight ticket voting and (2) voter turnout has decreased for voters who live in counties that previously had high levels of straight ticket voting. Both of these observed effects disproportionately affect African American voters and both effects are consistent with findings from other studies of straight ticket voting.

I have had the opportunity to analyze the relevant data on straight ticket voting in Michigan. Based on my analysis of these data, it is my considered opinion that the proposed removal of straight ticket voting in Michigan would have similar effects to removal in other states including North Carolina. The effects include increased levels of ballot rolloff in both partisan and nonpartisan contests, as well as longer voting lines in areas that have high levels of straight ticket voting. Longer voting lines would cause a decrease in voter turnout in Michigan. Given that straight ticket voting is currently utilized at higher rates in counties with large African American populations, this reduction in voter turnout would disproportionately affect African American voters.

II. Background and Qualifications

I am a Professor of Political Science at the University of North Carolina at Chapel Hill. I earned a B.S. in Political Science from the University of North Alabama in 1998, a M.A. in Political Science from Purdue University in 2000, and a Ph.D in Political Science from Washington University in St. Louis in 2005. I was an Assistant Professor of Political Science at the University Minnesota from 2004 – 2008. I have been on the faculty at the University of North Carolina at Chapel Hill since 2008. My curriculum vitae is attached to this report. I am being compensated at \$225 per hour for my work on this report and \$2100 per day for testimony.

My professional expertise lies in American politics generally, with a focus on political institutions, the U.S. Congress, historical institutionalism, and congressional elections. I teach courses on these topics at the both the graduate and undergraduate level. I am a co-author of the following books: *The American Congress* (Cambridge University Press), *Why Not Parties?* (University of Chicago Press), and *Ambition, Competition, and Electoral Reform* (University of Michigan Press). I have also published articles in peer-reviewed journals such as the *American Political Science Review*, the *American Journal of Political Science*, the *Journal of Politics*, *Legislative Studies Quarterly*, and *American Politics Research*. I currently serve on the editorial boards of *Legislative Studies Quarterly* and *State Politics and Policy Quarterly*. I maintain an active presence in the discipline, regularly giving public and academic talks, maintaining a membership in the American Political Science Association, and serving as a peer reviewer for books and articles in my areas of expertise.

I have a particular interest and expertise in ballot laws and ballot format. I have studied the history of ballot laws and the effects of ballot form on election outcomes across American history. This work has appeared in the book I co-authored (*Ambition, Competition, and Electoral Reform*) and in other articles, including a recent article I co-authored in *The Ohio State Law Journal*, titled “The Politics of Ballot Choice.”

III. Materials Reviewed

To establish an expert opinion in this case I consulted a variety of materials including academic literature and media sources. I also made extensive use of election returns, demographic data, and data on straight ticket voting in both North Carolina and Michigan for the years of 2012, 2014, and 2016.

IV. Discussion

History of ballot reform

U.S. states began transitioning to a government printed and supplied ballot in the late 19th century. Between 1888 and 1910 most states adopted some form of the Australian or “secret” ballot for conducting federal and statewide elections.¹ Unlike the previously employed party ballots that listed only a single party’s candidates, these new ballots listed the name and party affiliation of each candidate for a particular office.

States faced two main design choices in constructing Australian or secret ballots. The first was whether to organize the ballot by party or by office. The former are called “party column” ballots and they are designed with all candidates for a particular party listed under the party’s name and often include a large party symbol. The latter are called “office bloc” ballots and they are designed with all candidates for a particular office listed under the name of each office on the ballot.

The second choice was whether or not to provide a partisan selection device or “party box” on the ballot that would allow voters to choose all candidates for a particular party by checking a box or pulling a lever for the voter’s preferred party. These two choices combine to create four basic ballot types: (1) party column with party box, (2) party column without party box, (3) office bloc with party box, and (4) office bloc without party box.

The new ballot form made the voting decision more private for the voter and it made it much easier for a voter to cast a “split ticket” ballot that included choices from more than one party.² However, there is variation in split ticket voting by ballot type. The office bloc ballot is associated with a higher rate of split ticket voting than is the party column ballot. Likewise, straight ticket voting (STV) is more common when the ballot contains a party box.³ Ballot types can thus be sorted in the order in which they are most likely to facilitate straight ticket voting: party

¹ See Fredman, L.E. (1968), *The Australian Ballot: The Story of an American Reform*, Michigan State University Press and Engstrom, Erik J. (2012) “The Rise and Decline of Turnout in Congressional Elections: Electoral Institutions, Competition, and

² See Rusk, Jerrold G. (1970), “The Effect of the Australian Ballot Reform on Split Ticket Voting: 1876 -1908,” *American Political Science Review*, 64: 1220-1238.

³ See Burden, Barry C. and David C. Kimball (2004), *Why Americans Split Their Tickets: Campaigns, Competition, and Divided Government*, University of Michigan Press.

column with party box, party column without party box, office bloc with party box, office bloc without party box.⁴

Politicians and parties have contested ballot design choices from the outset of the adoption of the state printed ballot, with majority parties often seeking to design a ballot that enhances their party's prospects for electoral success.⁵ Though the primary motive of reform is typically partisan gain, this partisan gain has often been pursued by instituting reforms that would adversely affect racial and ethnic minorities.

Two examples illustrate this phenomenon. In 1901 Maryland Democrats enacted a ballot that removed the straight ticket voting option and party symbols from the ballot in an effort to cement control of power in the state by depressing turnout. As the *New York Times* noted, "Ex-Senator Arthur Pue Gorman and his friends are depending largely upon the intricacies [sic] of the new ballot at the coming election to secure their control of the Legislature ... They expect to disenfranchise, through mistakes and inability in marking their ballots, a sufficient number of negro voters to enable them to carry the state."⁶

Similarly, in 1949, supporters of Ohio Republican Senator Robert A. Taft spent the equivalent of more than \$800,000 in 2016 dollars in a successful effort to change the ballot format in Ohio to an office bloc without party box. Taft's supporters feared that his 1950 reelection would be imperiled by minority voters in urban areas casting a straight ticket ballot for the Democratic party that was led by the popular Democratic Governor Frank Lausche. Taft's supporters estimated that this change in ballot design could boost Taft's vote total by as much as 100,000 votes — a nontrivial sum for a candidate who by only 17,000 votes in the preceding election.⁷

Effects of Ballot Design

In addition to its effects on split ticket voting, the absence of a straight ticket voting option has been shown to have two major effects on election outcomes: (1) an increase in ballot rolloff and (2) longer lines at polling places that can reduce voter turnout.

⁴ See Carson, Jamie L. and Jason M. Roberts, (2013), *Ambition, Competition, and Electoral Reform: The Politics of Congressional Elections Across Time*, University of Michigan Press and Engstrom, Erik J. and Samuel Kernell, (2014) *Party Ballots, Reform, and the Transformation of American Politics*, Cambridge University Press.

⁵ See Engstrom, Erik J. and Jason M. Roberts, (2016), "The Politics of Ballot Choice," 2016. *The Ohio State Law Journal*, 77: 839-865.

⁶See "Troubles in Store for Maryland Voters." *The New York Times*, October 6, 1901, page 11.

⁷ See Key, V.O., (1964), *Politics, Parties, and Pressure Groups*, 5th edition, Crowell.

Ballot Rolloff

Ballot rolloff, which is also known as ballot dropoff, occurs when a voter does not make a choice in all contests or ballot questions on a ballot. In almost all cases, contests that are listed at the top of a ballot (i.e. President, Governor, etc.) receive more valid votes than do contests and questions appearing near the end of a ballot.

Voting is a costly act for citizens. It takes time and physical effort to register to vote, locate one's assigned polling place, travel to the voting site, and go through the voting process at the polling place. Political science research has consistently shown that raising the costs of voting has a deterrent effect on turnout and ballot completion.⁸

The elimination of the straight ticket voting option undoubtedly raises the costs of voting for some voters. At a purely mechanical level, it takes additional time and physical effort to complete a ballot when a voter must make an individual selection in each partisan contest. It can also be more difficult for the voter to complete the ballot correctly.⁹ The lack of a straight ticket voting option can produce more voided ballots and more ballot rolloff. Long ballots that do not have a straight ticket option tend to induce voter fatigue as voters struggle to wade through the ballot. Fatigued voters often turn in their ballots before they have marked choices for all races and ballot questions producing an "undervote" in offices that are placed lower on the ballot. Previous research on ballot rolloff finds that voters with lower levels of education and less experience voting are most likely to submit incomplete ballots.¹⁰

In my own co-authored work with Erik Engstrom, we investigated the effect of ballot design on rolloff from the presidential election to the U.S. House election for the 1880-1940 time period in all states. We found a consistent relationship

⁸ See Brady, Henry E. and John E. McNulty, (2011), "Turning Out to Vote: The Costs of Finding and Getting to the Polling Place," *American Political Science Review*, 105: 1-20; Aldrich, John, (1993), "Rational Choice and Turnout," *American Journal of Political Science*, 37: 246-278; McNulty, John E, Conor M. Dowling, and Margaret H. Ariotti, (2009), "Driving Saints to Sin: How Increasing the Difficulty of Voting Dissuades Even the Most Motivated Voters," *Political Analysis*, 17: 435-455.

⁹ The most well known example is the infamous "butterfly ballot" in Florida that caused thousands of voters to erroneously cast their vote for Pat Buchanan rather than Al Gore in the 2000 presidential election. These errors ultimately cost Gore the state of Florida and the presidency. See Wand, Jonathan N, Kenneth W. Shotts, Jasjeet S. Sekhon, Walter R. Mebane, JR., Michael C. Herron, and Henry E. Brady, (2001), "The Butterfly Did It: The Aberrant Vote for Buchanan in Palm Beach County, Florida," *American Political Science Review*, 95: 793-810.

¹⁰ See Walker, Jack L, (1966), "Ballot Forms and Voter Fatigue: An Analysis of the Office Block and Party Column Ballots," *Midwest Journal of Political Science*, 10: 448-463; Campbell, Angus, Philip Converse, Warren Miller, and Donald Stokes, (1960), *The American Voter*, John Wiley and Sons, Inc.

between the presence of a STV option and ballot rolloff. The absence of a STV option was associated with an increase in ballot rolloff of approximately 1.5% from the presidential contest to the U.S. House contest.¹¹

Voter Turnout

As noted above, voting is a costly act. It takes time and physical effort for a voter to register to vote, locate his or her polling place, travel to the polling place, and go through the act of voting. The absence of a straight ticket option increases the costs of voting in several ways. First, for voters who wish to vote for candidates of the same party, the absence of a STV option increases the amount of time and physical effort required to complete the ballot. Second, the increased time needed to complete the ballot can lead to long lines at polling places. Long lines have been shown to have a detrimental effect on the voting process by discouraging voters from voting, increasing economic costs for those who wait in long lines, and by reducing voter confidence in elections.¹² It has been estimated that long lines discouraged more than 700,000 registered voters from voting in the 2012 election.¹³ An field study of voters in California by Douglas Spencer and Zachary Markovits found that having more than 5 people in a voting line tripled the of probability of a voter reneging and failing to vote.¹⁴

Political science research demonstrates that long lines at polling places are not uniformly distributed throughout states. They are concentrated in urban areas and in localities with large minority populations. For example, the average waiting time for African-American voters in 2012 was 23.3 minutes compared to 11.6 for White voters.¹⁵ This is likely one reason why African-American turnout often lags behind turnout rates for White voters.

North Carolina's Elimination of Straight Ticket Voting

The North Carolina General Assembly presented House Bill 589 (HB 589) also known as the Voter Information Verification Act to Governor Pat McCrory on July 29, 2013. Governor McCrory signed the bill on August 12, 2013. The bill altered many aspects of election practice and administration in the state of North Carolina. The

¹¹ We did not analyze rolloff rates for contests lower than U.S. House on the ballot.

¹² See Stewart, Charles III and Stephen Ansolabehere, (2015), "Waiting to Vote," *Election Law Journal*, 14: 47-53.

¹³ See Stewart, Charles III, (2015) "Managing Polling Place Resources," Caltech/MIT Voting Technology Project.

¹⁴ Douglas M. Spencer and Zachary S. Markovits, "Long Lines at Polling Stations? Observations from an Election Day Field Study," *Election Law Journal* 9(1): 3-17.

¹⁵ See Stewart, Charles III, (2015) "Managing Polling Place Resources," Caltech/MIT Voting Technology Project.

United States Court of Appeals for the Fourth Circuit subsequently invalidated many, but not all, aspects of this law.¹⁶

One of the most significant changes to North Carolina election practice that was not part of the federal case against the law was the elimination of the straight ticket voting option. Section 32.1 of HB 589 titled “Vote the Person Not the Party” eliminated the STV provision that allowed voters to select all of a political party’s candidates by checking one box. The 2014 election was the first one held in North Carolina without a straight ticket voting option since North Carolina adopted the Australian or secret ballot in 1909.¹⁷ Since 2014 voters have been required to mark the ballot for each race individually even if they wish to vote for all of one party’s candidates.

For many North Carolina voters this was a major change to election practice. In the 2010 midterm election, 1.1 million or 43.6% of North Carolina voters chose the straight ticket option. In the 2012 election, the numbers were even higher, with 2.55 million out of 4.47 million voters (57.2%) casting a ballot by choosing the straight ticket option.¹⁸

Straight ticket voting was quite popular in North Carolina, but not uniformly so across the state’s 100 counties. In some counties, as few as 33% of voters chose to vote a straight ticket in 2012, but in others more than 75% of voters chose the straight ticket option.

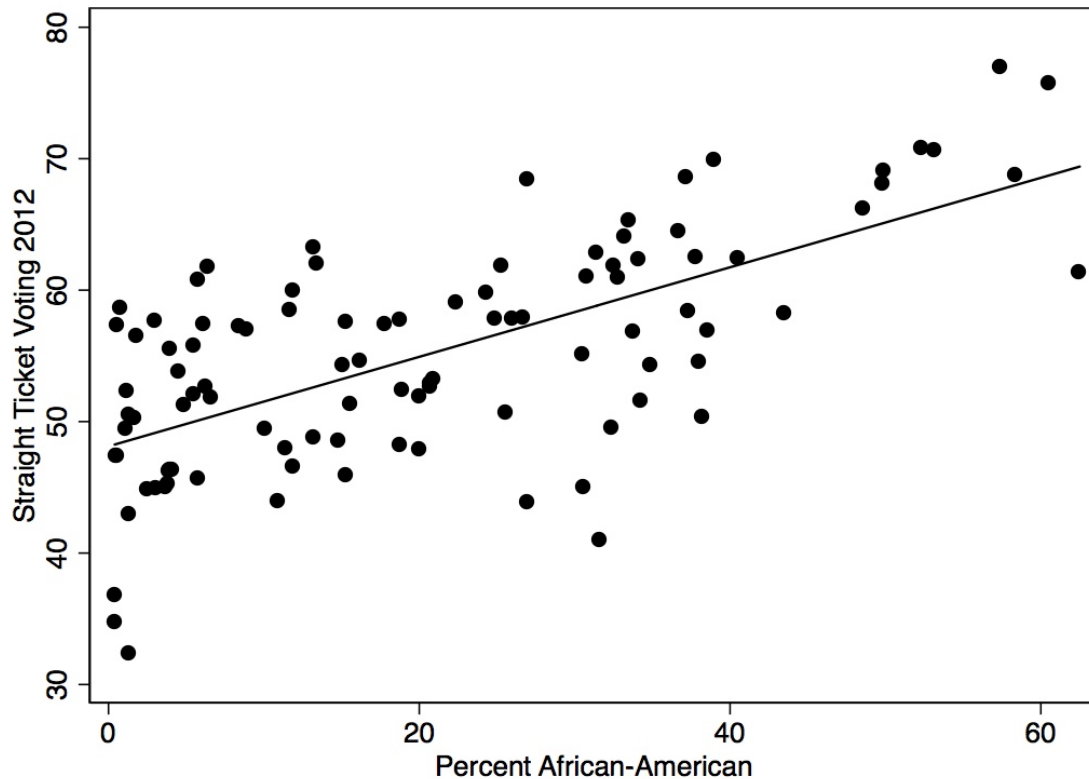
There was a strong, positive correlation (0.66) between the racial composition of counties in North Carolina and the degree of straight ticket voting. As Figure 1 below reveals, counties with larger African-American populations had much higher levels of straight ticket voting in 2012. This effect also holds in a regression model that controls for the population of a county and the poverty level of a county. When those two factors are controlled for, the effect of African-American population is still positive and statistically significant. Substantively, a one-percent change in the African-American population of a county is associated with a 0.35% increase in the level of straight ticket voting in North Carolina in 2012.

¹⁶ *North Carolina NAACP v. McCrory*, (4th Cir. 2016), No. 16-1469.

¹⁷ Prior to 1909 North Carolinians voted with ballots provided by the competing political parties.

¹⁸ Data on straight ticket voting was compiled from precinct level election results downloaded from the North Carolina State Board of Elections FTP site. The 2010 results were taken from filename priprecinct11xx02xx2010.zip. The 2012 results were taken from filename priprecinct11xx06xx2012.zip.

Figure 1
Straight Ticket Voting and African-American Population, N. Carolina 2012¹⁹



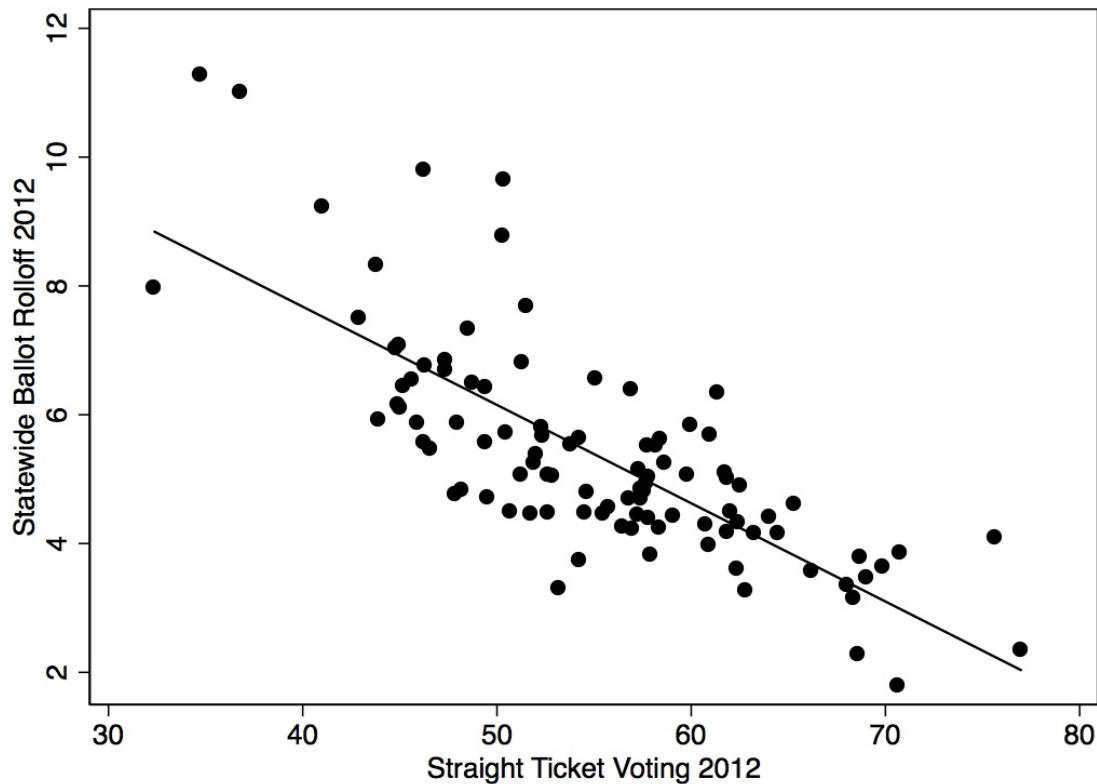
There was also a strong, negative correlation (-0.77) between the rate of straight ticket voting in a county and the ballot rolloff in statewide, partisan races.²⁰ As Figure 2 below demonstrates, counties with higher levels of straight ticket voting

¹⁹ The X-axis is the percent African-American population for each North Carolina county. The Y-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. Each dot represents a county, the black line represents the linear fit between the two variables.

²⁰ The rolloff rate was calculated by the following formula: $(100 * (\text{maxvotes} - \text{minvotes}) / (\text{maxvotes}))$, where maxvotes equals the total number of votes cast in the statewide contest that received the most votes in a county and minvotes equals the total number of votes in the statewide contest the received the least votes in a county. Statewide races include U.S. president, North Carolina Governor, North Carolina Lieutenant Governor, North Carolina Secretary of State, North Carolina Commissioner of Agriculture, North Carolina Commissioner of Insurance, North Carolina Commissioner Labor, North Carolina Superintendent of Public Instruction, North Carolina State Treasurer, and North Carolina State Auditor. The race for North Carolina Attorney General was excluded from this analysis because it was uncontested.

had much lower levels of ballot rolloff than did counties with lower levels of straight ticket voting. This is consistent with the extant political science research on the relationship between ballot rolloff and straight ticket voting.

Figure 2
Straight Ticket Voting and Ballot Rolloff in Partisan Races, N. Carolina 2012²¹

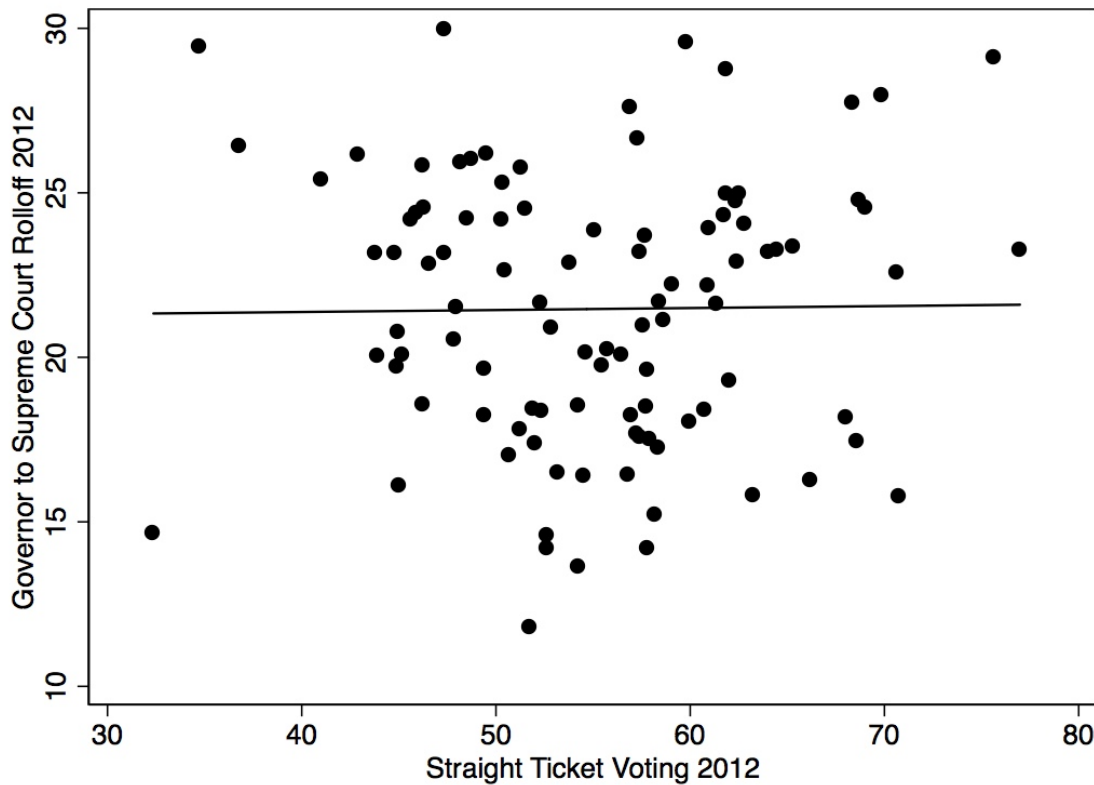


Nonpartisan Races

In addition to statewide partisan races, North Carolina has statewide elections for the North Carolina Supreme Court. For these contests the names of the candidates are listed, but no party affiliation is listed on the ballot. For the 2012 contest for a seat on the North Carolina Supreme Court there is no discernible relationship between the level of straight ticket voting in a county and the number of voters who made a selection in the North Carolina Supreme Court contest. As Figure 3 below demonstrates, the correlation between the level of straight ticket voting in a county and the rolloff rate for the Supreme Court contest was near zero (0.01). These results provide no evidence that higher utilization of the straight ticket voting option increases the rate of ballot rolloff in nonpartisan contests.

²¹ The Y-axis is the rolloff rate for statewide partisan races for each North Carolina county. The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 3
Straight Ticket Voting and Ballot Rolloff
North Carolina Supreme Court 2012²²



The results above demonstrate a clear relationship between the racial composition of North Carolina counties, straight ticket voting, and the level of ballot rolloff in statewide partisan races. Counties with large African American populations had higher utilization of the straight ticket voting option in 2012. Counties with high levels of straight ticket voting utilization had significantly lower levels of ballot rolloff in statewide partisan races. Additionally, there was no discernible relationship between straight ticket voting utilization and ballot rolloff in nonpartisan contests in 2012.

²² The Y-axis is the rolloff rate from the Governor contest to the North Carolina Supreme Court contest for each North Carolina county. The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. Each dot represents a county, the black line represents the linear fit between the two variables.

Effects of Eliminating Straight Ticket Voting in North Carolina

The two most recent elections in North Carolina — 2014 and 2016 — were conducted without the straight ticket option for voters. The following analysis assesses the effects of the elimination of the straight ticket voting option on ballot rolloff and voter turnout for these two election years.

North Carolina 2014

The 2014 North Carolina election was conducted in a midterm election year, so none of the council of state offices were on the ballot.²³ The only statewide partisan race on the North Carolina ballot in 2014 was the U.S. Senate contest between Thom Tillis and Kay Hagan. All ballots in the state also included partisan races for the U.S. House, North Carolina Senate, and North Carolina House,²⁴ but the ballot length is considerably shorter in midterm years than in presidential years in North Carolina.

Ballot rolloff tends to increase as ballot length increases, yet the available data indicate a strong association between the removal of straight ticket voting option and ballot rolloff in 2014 despite the short ballot. In 2010, the average level of rolloff from the U.S. Senate contest to the North Carolina House contest in North Carolina counties was 8.3%, while in 2014 it was 17.79%. Contests for the North Carolina House vary from district to district in terms of candidate quality, candidate funding, and other factors, but these data do suggest that the elimination of straight ticket voting was associated with a large increase in rolloff for partisan contests in 2014.

The evidence also indicates that the removal of the straight ticket voting option produced longer wait times for North Carolina voters in 2014. Following the 2014 election, the North Carolina State Board of Elections conducted a survey of election officials in each North Carolina county to assess the extent of long wait times both during the early voting period and on election day 2014.²⁵ In my co-authored work with Erik Engstrom we use this survey to show that the population of a county and

²³ The council of state includes the following offices: North Carolina Governor, North Carolina Lieutenant Governor, North Carolina Secretary of State, North Carolina Attorney General, North Carolina Commissioner of Agriculture, North Carolina Commissioner of Insurance, North Carolina Commissioner of Labor, North Carolina Superintendent of Public Instruction, North Carolina State Treasurer, and North Carolina State Auditor.

²⁴ The ballot did include a variety of local contests that varied from jurisdiction to jurisdiction.

²⁵ See North Carolina State Board of Elections, “November 2014: State Board of Elections Analysis of Voter Wait Times.”

the average level of straight ticket voting in 2010 and 2012 are positively associated with longer reported election day wait times in the 2014 election.²⁶

In addition, the Pew Charitable Trust collects data on voter wait time to construct its Elections Performance Index.²⁷ In 2014, North Carolina was estimated to have the longest wait time for voting in the country. In 2012, by contrast, twelve states had higher estimated wait times than did North Carolina. Taken together, these data demonstrate that the increased time needed to complete ballots without the straight ticket voting option likely produced increased wait times for North Carolina voters in 2014.

North Carolina 2016

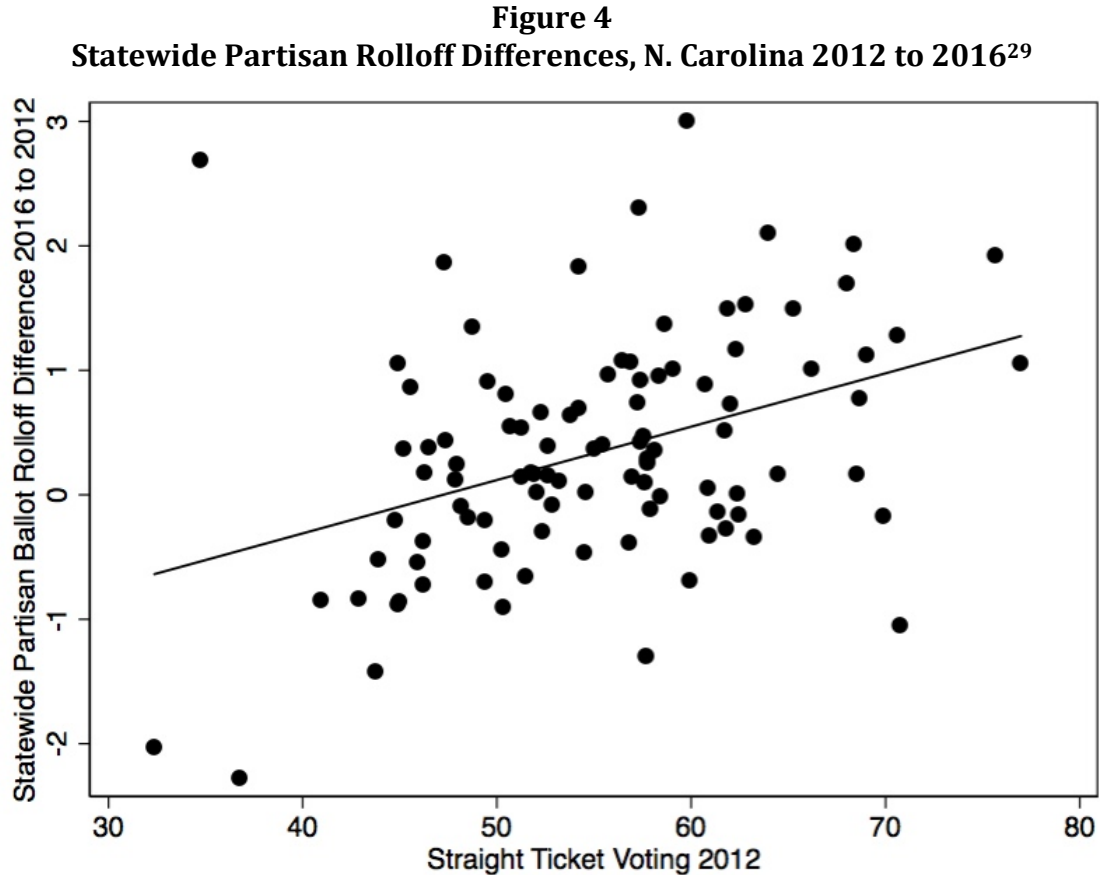
The 2016 election in North Carolina included contest for the full council of state²⁸ in addition to a U.S. Senate contest, the contest for U.S. president, as well as U.S. House and N.C. Senate and House contests. All voters faced a ballot with at least 15 statewide partisan races in North Carolina in addition to numerous local races. Ballot rolloff was up slightly in statewide partisan races from 5.37% in 2012 to 5.71% in 2016, but there was considerable variance across the counties. As Figure 4 below demonstrates, counties that had higher levels of straight ticket voting in 2012 — the last year it was available — demonstrated the largest increases in rolloff from 2012 to 2016.

As was shown in Figure 1, counties with large African-American populations had the highest incidence of straight ticket voting in 2012. Taken together these data demonstrate that the elimination of the straight ticket voting option in North Carolina is associated with an increase in ballot rolloff in counties that have larger African-American populations. This finding is consistent with previous findings in the literature.

²⁶ See Engstrom, Erik J. and Jason M. Roberts, (2016), “The Politics of Ballot Choice,” 2016. *The Ohio State Law Journal*, 77: 839-865.

²⁷ Information on the Elections Performance Index can be found at: <http://www.pewtrusts.org/en/multimedia/data-visualizations/2014/elections-performance-index#intro>

²⁸ See footnote 23 for a full list of these offices.



As discussed earlier, another potential effect of the elimination of the straight ticket voting option would be a decline in voter turnout. For voters who wish to vote for all candidates of a single party the absence of a straight ticket option increases the amount of time needed to complete the ballot. In North Carolina a voter who voted a straight ticket in the 2012 election and wished to do the same in 2016 election would have had to make at least 14 additional marks on the ballot. If no additional polling stations were added this would inevitably increase the length of lines at polling places during times of high demand for voting. The increased line length would be exacerbated in areas that had experienced high utilization of straight ticket voting in past elections.

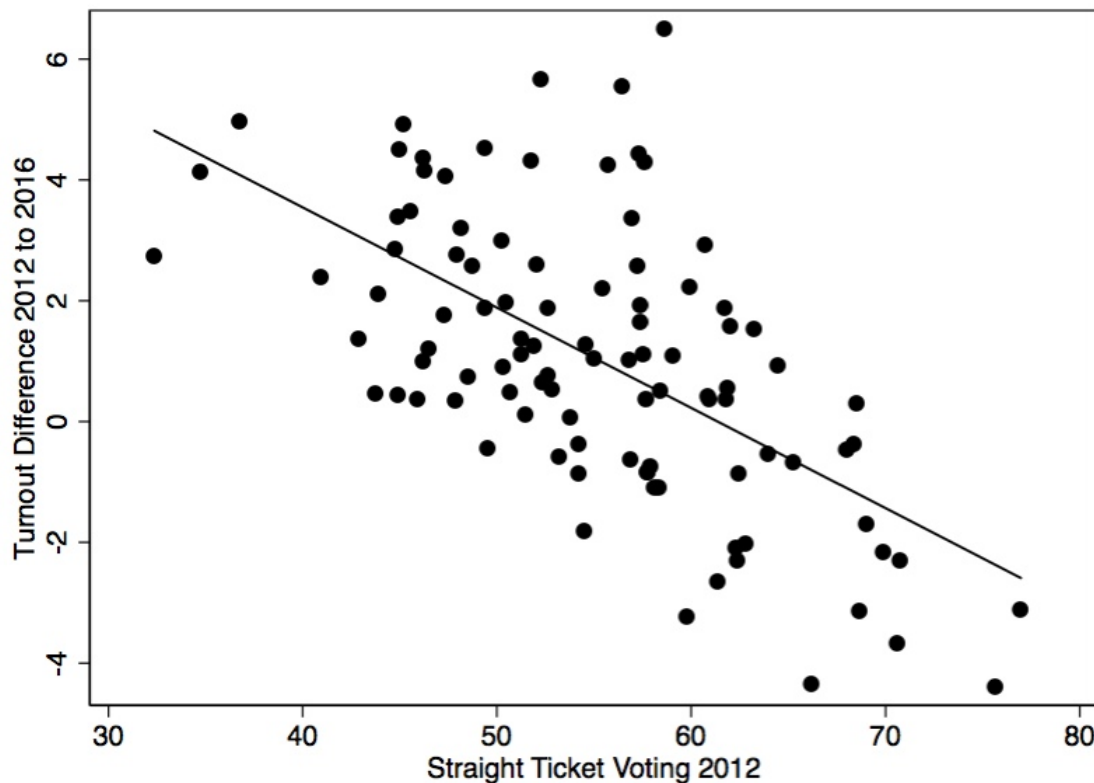
As noted above, considerable research has demonstrated that long lines at polling places have a deterrent effect on potential voters. Longer waiting times increase the

²⁹ The Y-axis is the difference in rolloff rate for statewide partisan races from 2016 to 2012 for each North Carolina county. The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. Each dot represents a county, the black line represents the linear fit between the two variables.

costs associated with voting and can lead potential voters to forego voting due to inadequate time to stand in long lines.

As Figure 5 demonstrates, voter turnout in 2016 was down considerably from 2012 levels in North Carolina counties that had high utilization of straight ticket voting in 2012. These are also counties that have large African-American populations. Turnout among African-American voters was down nationwide in 2016³⁰, so it is not necessarily the case that all the decline shown in Figure 5 is attributable to the removal of the straight ticket option.

Figure 5
North Carolina Turnout Difference 2012 to 2016³¹



To more directly assess the relationship between voter turnout in 2016 and previous levels of straight ticket voting in North Carolina I utilized the North Carolina voter file and voter history file for registered voters in North Carolina.

³⁰ See report on 2016 turnout at: <http://www.pewresearch.org/fact-tank/2017/05/12/black-voter-turnout-fell-in-2016-even-as-a-record-number-of-americans-cast-ballots/>

³¹ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. The Y-axis is the turnout difference in the county from 2012 to 2016. Negative numbers indicate lower turnout in 2016 than in 2012. Each dot represents a county, the black line represents the linear fit between the two variables.

These two files contain information on whether a registered voter voted, the person's address, and demographic information such as racial and gender identity. I combined this information with county level data on poverty level, straight ticket voting in 2012, and the availability of early voting in the county to assess factors affecting voter turnout in 2016.³²

I used this information to fit a logistic regression model of whether an individual voting in the 2016 general election as a function of whether they voted in 2012, their reported race, reported gender, the poverty level of the county, straight ticket voting level in the county in 2012, and the availability of early voting in the county.

The results confirmed my expectations. Registered voters who voted in 2012 were more likely to vote in 2016 than were those who did not vote in 2012. Registered voters who reported their race as white and those who identify as female were also more likely to vote than other race and gender categories. Registered voters from counties that provided more early voting opportunities also had higher turnout.³³ Even controlling for these factors, registered voters from counties with higher levels of straight ticket voting in 2012 were less likely to vote in 2016 than those from counties with lower levels of straight ticket voting in 2012.

For example, a hypothetical African American male who voted in 2012 and lives in a county that had the lowest observed level of straight ticket voting in 2012 had a 0.99 probability of also voting in 2016. However, a hypothetical African-American male who voted in 2012 and lives in a county that had the highest observed level of straight ticket voting in 2012 had a 0.91 probability of also voting in 2016. This 0.08 difference is both statistically and substantively significant. In counties with high levels of straight ticket voting in 2012, approximately 8 out every 100 African-American voters who voted in 2012 were deterred from voting in 2016 due to the elimination of the straight ticket voting option in North Carolina.

The elimination of straight ticket voting also reduced the probability of voting for white registered voters. A hypothetical white male who voted in 2012 and lives in a county that had the lowest observed level of straight ticket voting in 2012 had a 0.99 probability of also voting in 2012. However, a hypothetical white male who voted in 2012 and lives in a county that had the highest observed level of straight ticket voting in 2012 had a 0.94 probability of also voting in 2016.

These results demonstrate that the elimination of straight ticket voting in North Carolina did have a deterrent effect on voter turnout in 2016. The effect was more pronounced in counties that had higher utilization of the straight ticket voting option in past election and was more pronounced for African American voters, who

³² Early voting availability was calculated as the number of early voting site minutes per registered voter in the county. Data taken from insightus and available at: http://insight-us.org/eve_1/eve.html.

³³ The estimate for poverty level did not reach conventional levels of statistical significance.

saw their probability of voting in these counties reduced by 37.5% more than for white voters in the same county.

To conclude this section the available data on North Carolina's implementation of a straight ticket voting ban has had two observable effects on voting in North Carolina: (1) the level of ballot rolloff has increased in counties that previously had high levels of straight ticket voting and (2) voter turnout has decreased for voters who live in counties that previously had high levels of straight ticket voting. Both of these effects disproportionately affect African American voters and both effects are consistent with findings from other studies of straight ticket voting.

Straight Ticket Voting in Michigan

This section of the report will utilize available data on straight ticket voting patterns in Michigan to predict the potential effects of a straight ticket voting ban in that state.³⁴ I will also directly compare statistically similar counties in North Carolina and Michigan to estimate how a straight ticket voting ban would have affected elections in Michigan in 2016.

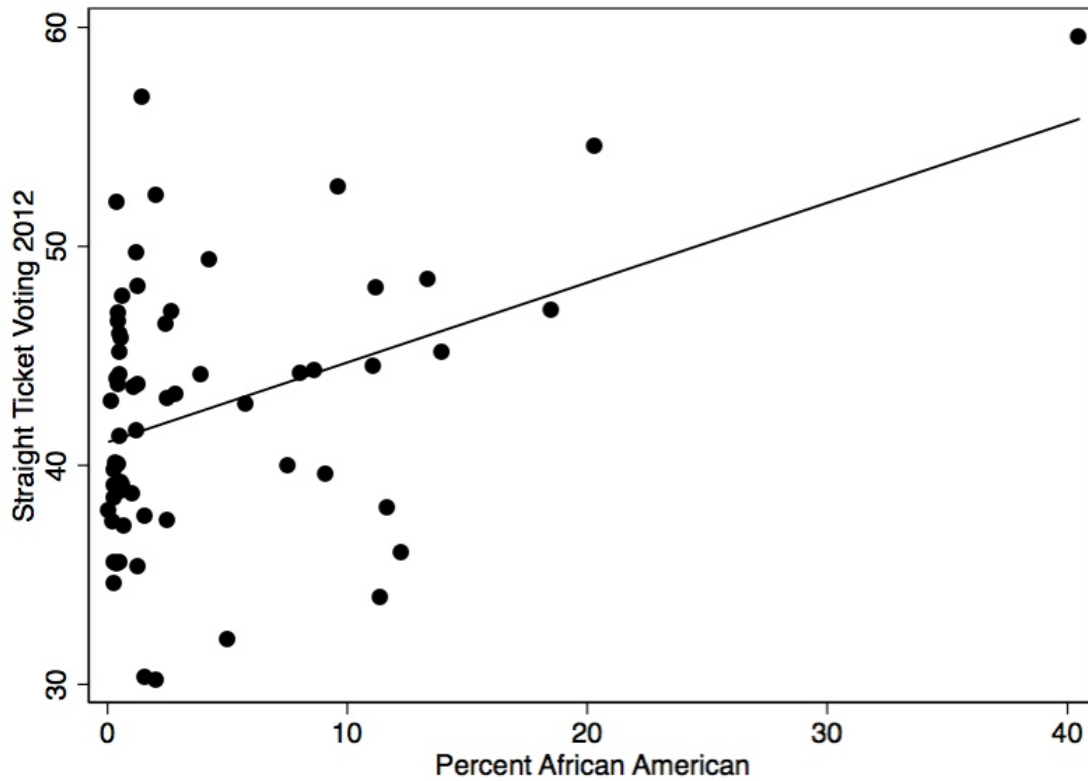
Straight ticket voting has been popular among registered voters in Michigan. In the past three elections (2012, 2014, 2016) almost half of Michigan voters have chosen to use the straight ticket option when casting their ballot.³⁵ As was the case in North Carolina, straight ticket voting is more widely used in Michigan counties that have a higher proportion of African American residents. As Figures 6, 7, and 8 below demonstrate, there is a strong, positive correlation³⁶ between the African American population of a county and the level of straight ticket voting in a county for the past three elections in Michigan.

³⁴ All counties are included in the 2016 data. Several counties have missing or incomplete data for 2012 and 2014 so they are excluded from this analysis. The counties that have complete data for 2012 and 2014 represent more than 95% of the population of the state of Michigan.

³⁵ The actual percentages were 49.2% in 2016, 48.8% in 2014, and in 2012 it was 48.2%. There is some data incompleteness for 2012 and 2014.

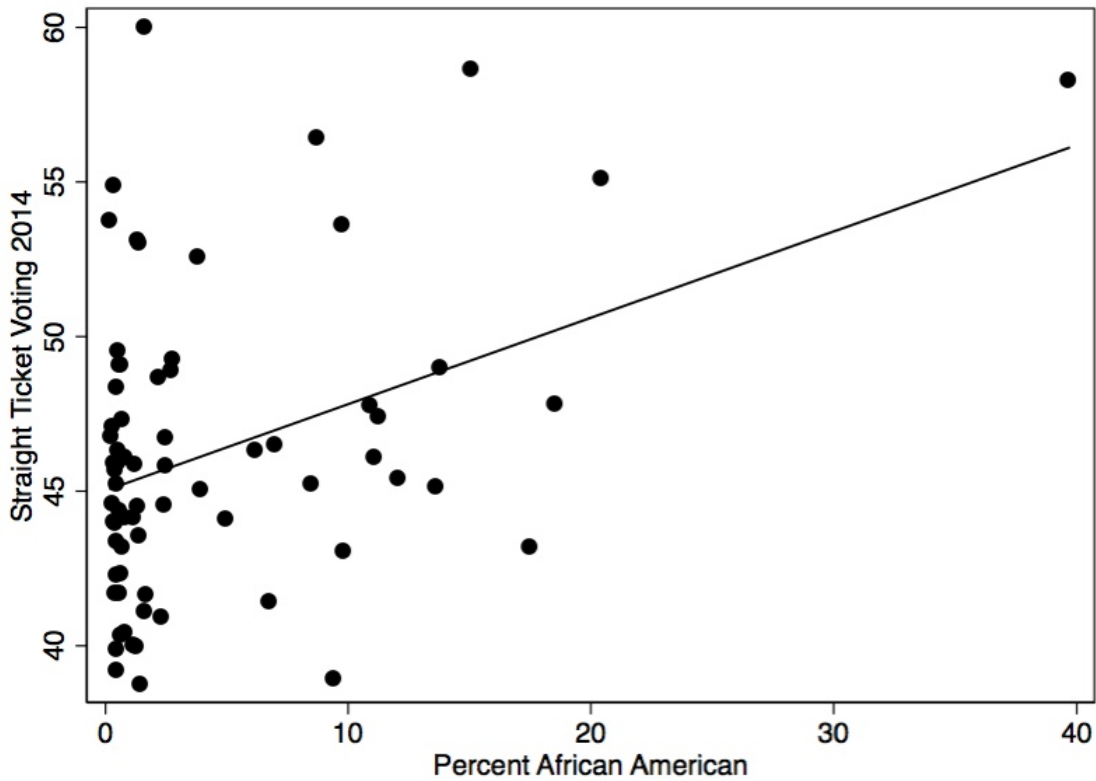
³⁶ The correlations are 0.40 in 2012, 0.38 in 2014, and 0.47 in 2016.

Figure 6
Straight Ticket Voting and African American Population, Michigan 2012³⁷



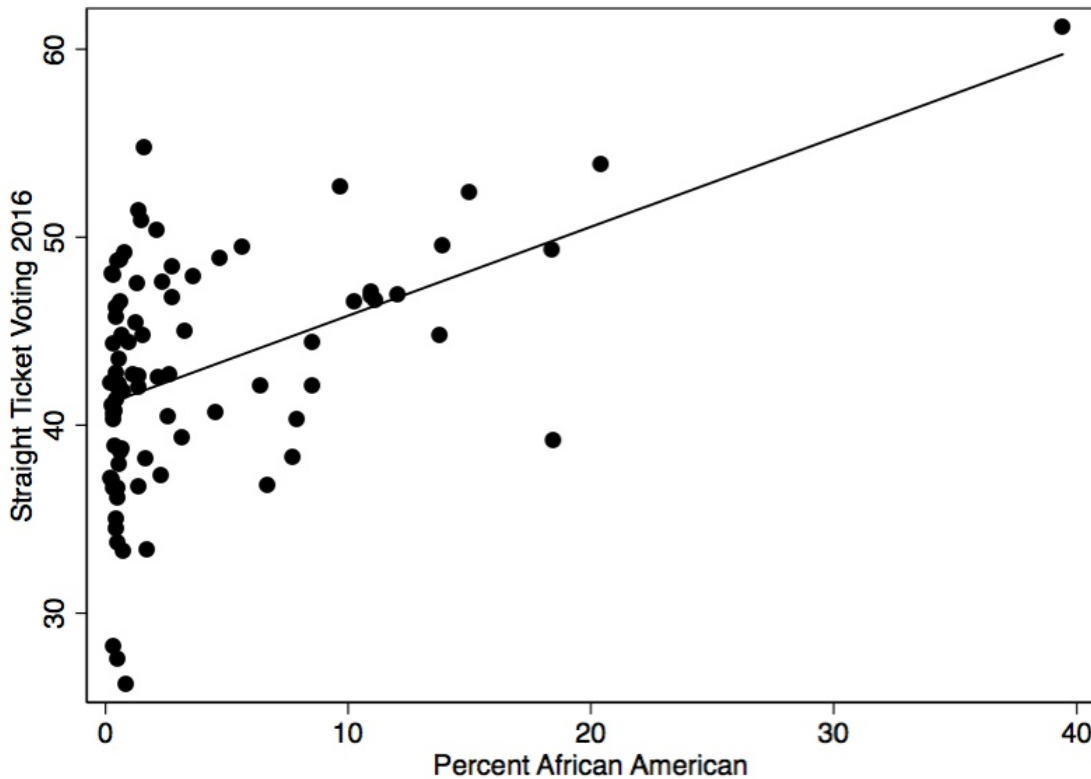
³⁷ The Y-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. The X-axis is the percent of the population of each county that is African American. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 7
Straight Ticket Voting and African-American Population, Michigan 2014³⁸



³⁸ The Y-axis is the percent of voters in each county that chose to vote a straight ticket in 2014. The X-axis is the percent of the population of each county that is African American. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 8
Straight Ticket Voting and African-American Population, Michigan 2016³⁹



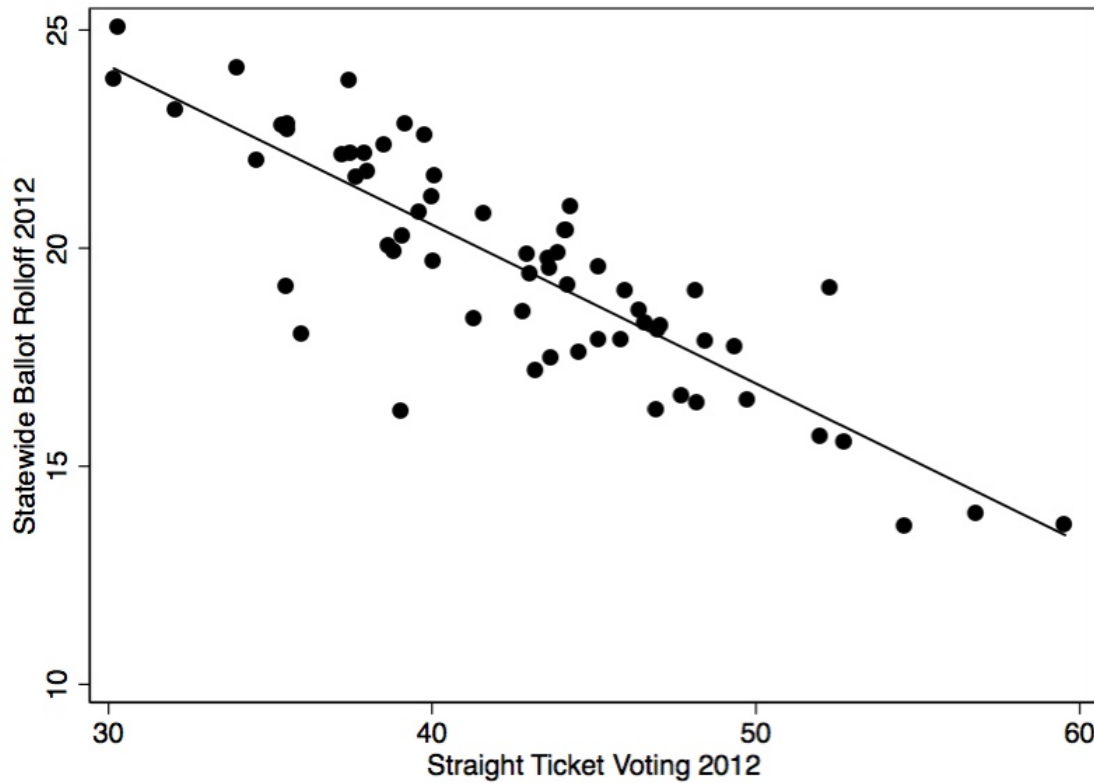
The data presented in Figures 6, 7, and 8 clearly demonstrate that a removal of straight ticket voting would disproportionately affect African American voters.

One likely effect would be higher levels of ballot rolloff. As was the case for North Carolina, there is a strong, negative correlation between levels of straight ticket voting and statewide, partisan ballot rolloff in Michigan. Figures 9, 10, and 11 below demonstrate this relationship for the 2012, 2014, and 2016 elections.⁴⁰ Across all three elections I have analyzed, ballot completion rates are higher in counties that have higher utilization of straight ticket voting.

³⁹ The Y-axis is the percent of voters in each county that chose to vote a straight ticket in 2016. The X-axis is the percent of the population of each county that is African American. Each dot represents a county, the black line represents the linear fit between the two variables.

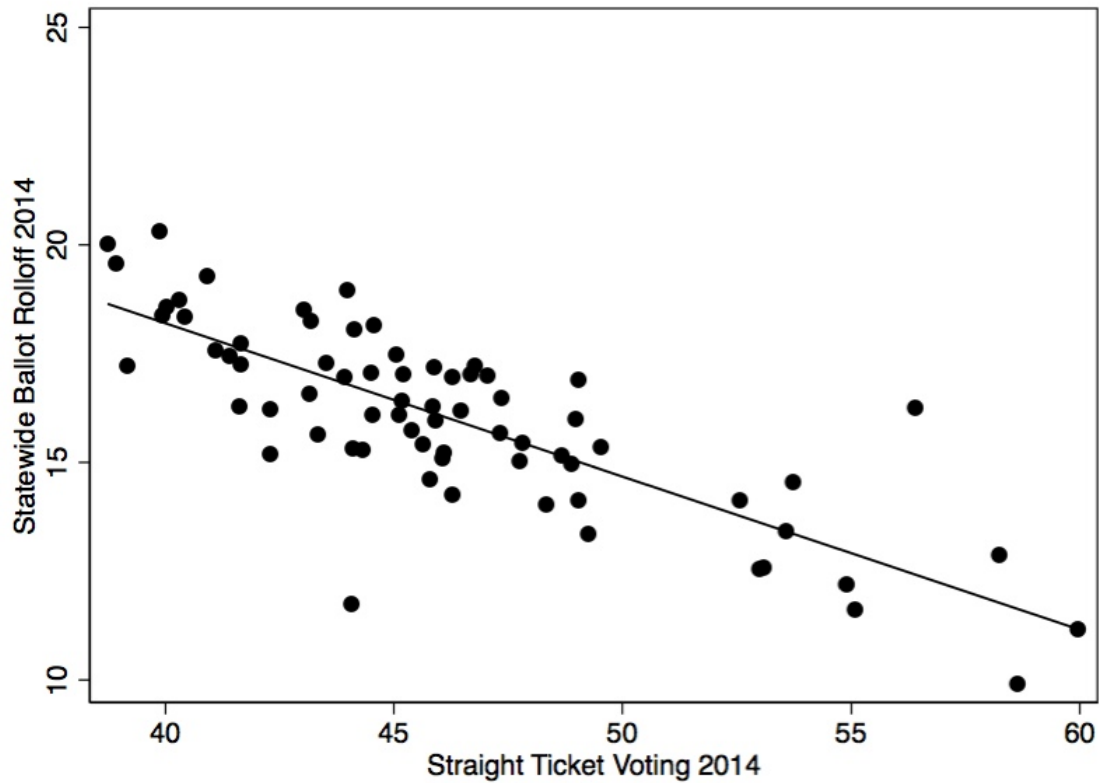
⁴⁰ Unlike North Carolina, Michigan holds its contests for Governor and other statewide office in midterm years. As a result, Michigan always has multiple statewide, partisan races in each election year.

Figure 9
Straight Ticket Voting and Ballot Rolloff in Partisan Races, Michigan 2012⁴¹



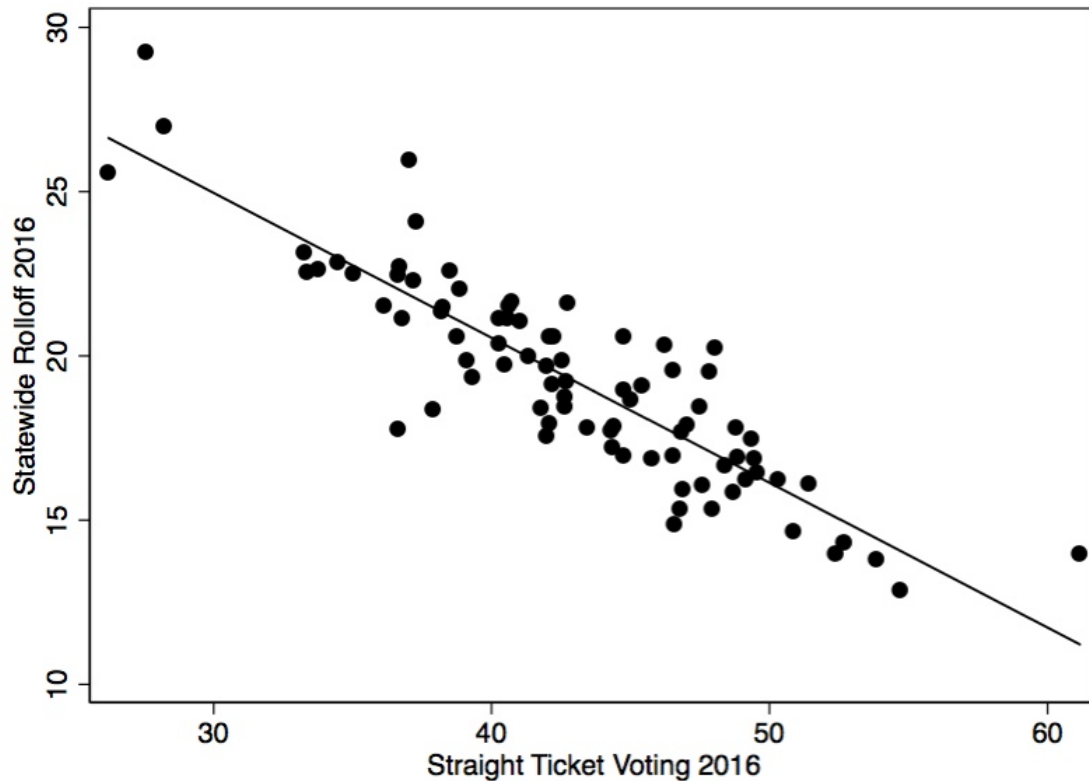
⁴¹ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. The Y-axis is the ballot rolloff rate for statewide partisan contests in 2012 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 10
Straight Ticket Voting and Ballot Rolloff in Partisan Races, Michigan 2014⁴²



⁴² The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2014. The Y-axis is the ballot rolloff rate for statewide partisan contests in 2014 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 11
Straight Ticket Voting and Ballot Rolloff in Partisan Races, Michigan 2016⁴³



As is true in North Carolina, Michigan also conducts statewide, nonpartisan contests for the Michigan Supreme Court. Voters who utilize the straight ticket option are required to make individual choices in these contests if they wish to register a valid vote in these contests. Figures 12, 13, and 14 below plot the rolloff rate for these races for 2012, 2014, and 2016.⁴⁴ The relationship between levels of straight ticket in Michigan counties and the rolloff rate for nonpartisan Supreme Court contests is slightly negative across all three years that I have analyzed.⁴⁵ Counties that have higher levels of straight ticket voting in Michigan also have a higher proportion of voters also choosing to vote in these nonpartisan contests. This finding is consistent

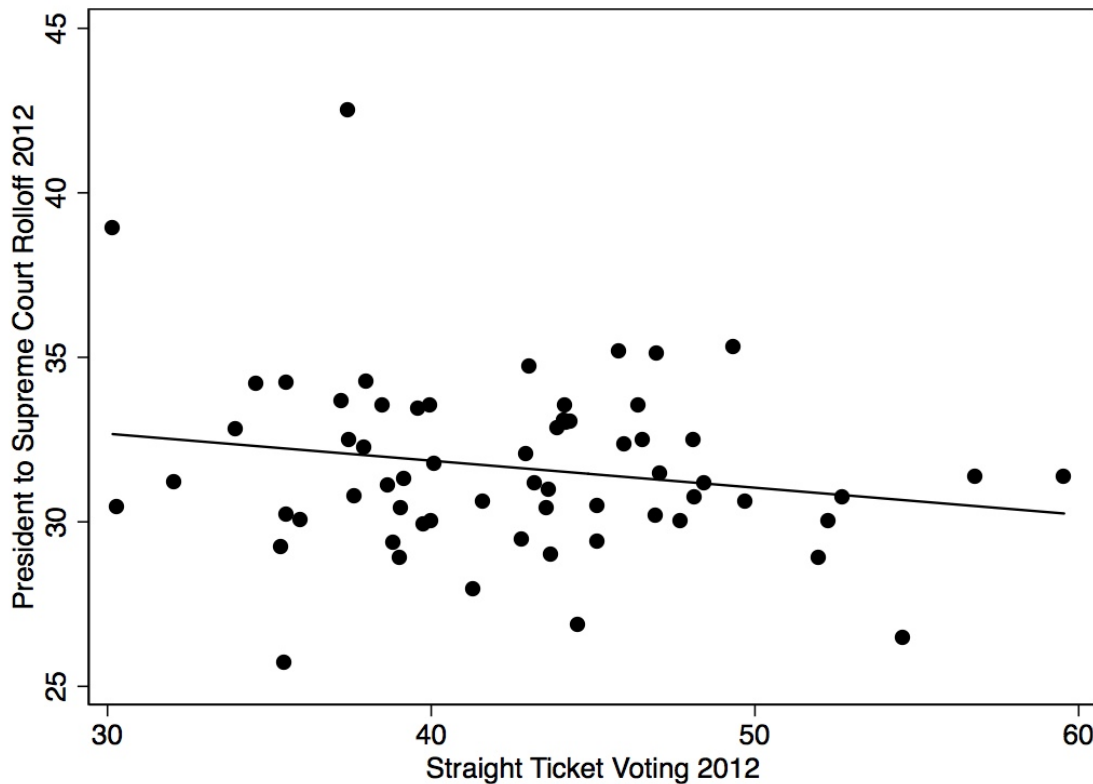
⁴³ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2016. The Y-axis is the ballot rolloff rate for statewide partisan contests in 2016 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

⁴⁴ Rolloff rate was calculated for the contest receiving the most votes. In 2012 and 2016 these were contests for U.S. president, in 2014 this was the contest for Governor of Michigan. These data only cover contests for full terms for the Supreme Court. I also analyzed contests for partial terms and the results are highly similar to those for full terms.

⁴⁵ The correlation between rolloff in these races and straight ticket voting is -0.19 in 2012, -0.26 in 2014, and -0.28 in 2016.

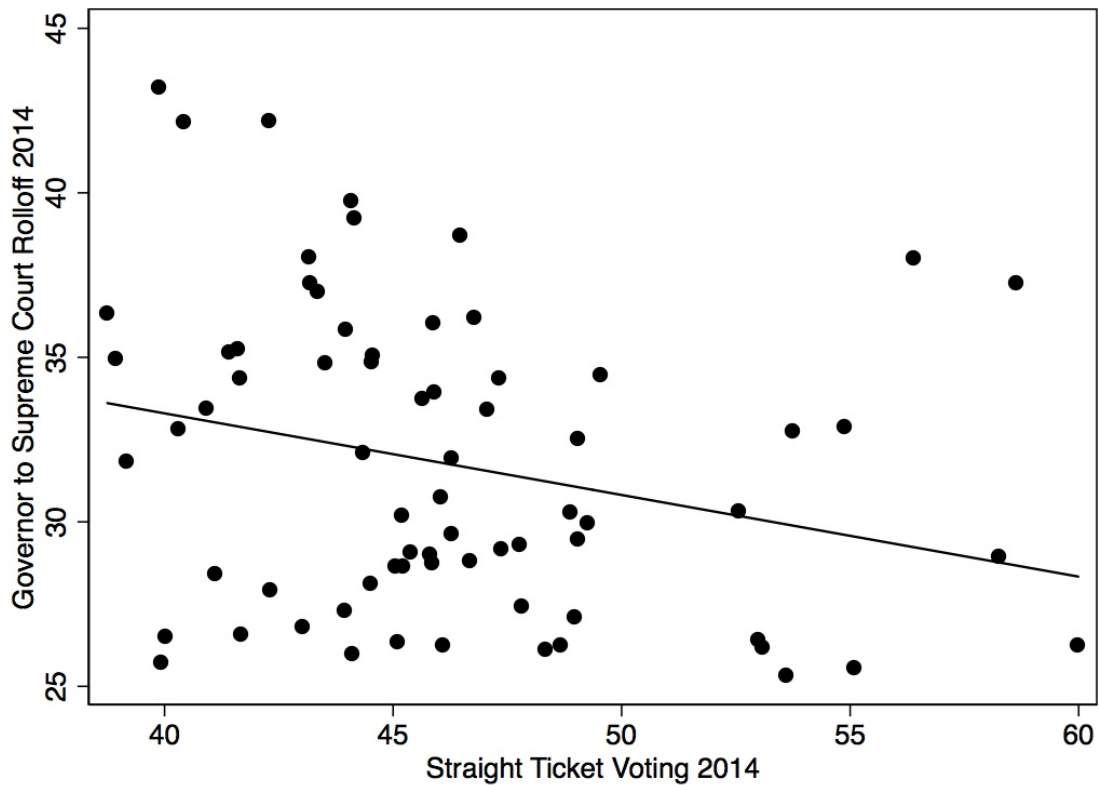
with the literature on voter fatigue, which finds that rolloff is more common in localities with longer ballots requiring the voter to make more choices. The results in Figures 12, 13, and 14 are also consistent with the argument that voters who choose to efficiently make a choice in all the partisan contests on the ballots are more likely to exert the additional effort required to participate in nonpartisan contests.

Figure 12
Straight Ticket Voting and Ballot Rolloff
Michigan Supreme Court 2012⁴⁶



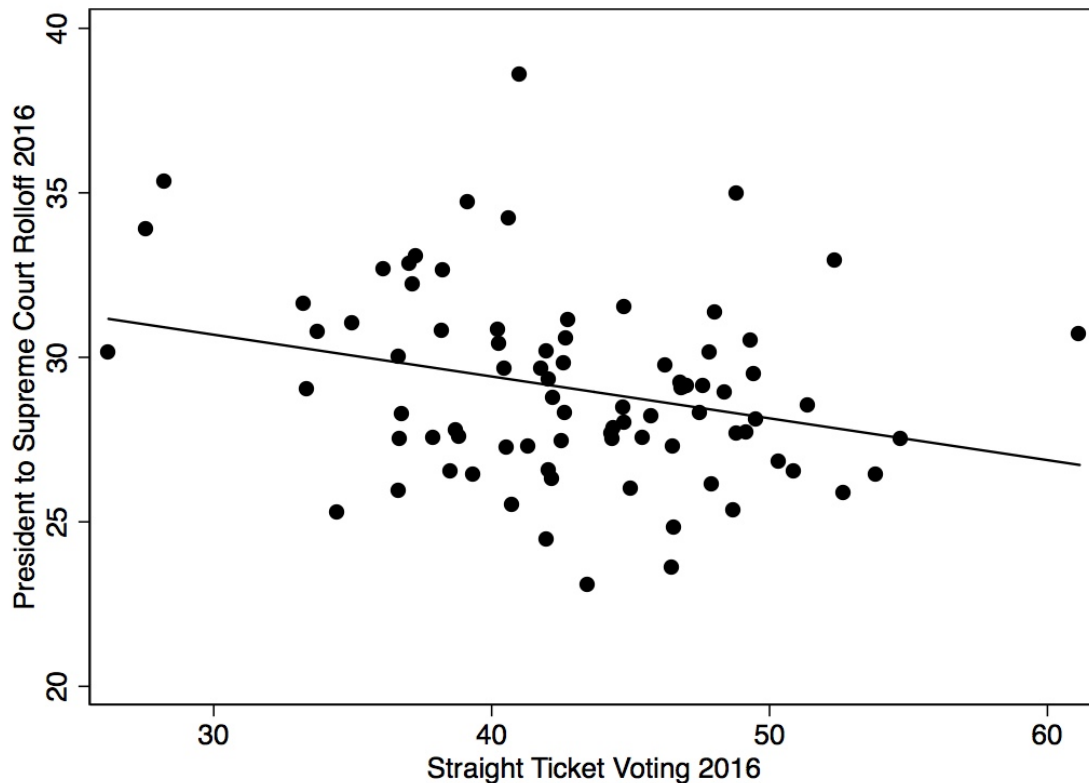
⁴⁶ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. The Y-axis is the ballot rolloff rate from the presidential contest to the Michigan Supreme Court contest in 2012 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 13
Straight Ticket Voting and Ballot Rolloff
Michigan Supreme Court 2014⁴⁷



⁴⁷ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2014. The Y-axis is the ballot rolloff rate from the presidential contest to the Michigan Supreme Court contest in 2014 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

Figure 14
Straight Ticket Voting and Ballot Rolloff
Michigan Supreme Court 2016⁴⁸



Taken as a whole, my analysis of the relevant data indicates that removal of the straight ticket option in Michigan would have similar effects to removal in other states including North Carolina. The effects include increased level of ballot rolloff in both partisan and nonpartisan contests. In addition, if the straight ticket option were removed and elections were carried out with similar deployment of voting equipment and personnel, Michigan voters would experience longer lines in areas that previously had high levels of straight ticket voting. These long lines would lead to a decrease in voter turnout in Michigan. This reduction could be greater than what was seen in North Carolina given that Michigan does not currently have an early voting period and so most voters are voting on election day. Given that straight ticket voting is currently utilized at higher rates in counties with large African American populations, this reduction in voter turnout would disproportionately affect African American voters.

⁴⁸ The X-axis is the percent of voters in each county that chose to vote a straight ticket in 2012. The Y-axis is the ballot rolloff rate from the presidential contest to the Michigan Supreme Court contest in 2012 for each county. Each dot represents a county, the black line represents the linear fit between the two variables.

Comparing Michigan and North Carolina in 2016

The court preliminarily enjoined the removal of the straight ticket voting option for Michigan in 2016. This action provides a unique opportunity to directly assess the effect of STV removal on ballot rolloff. Both legislatures (Michigan and North Carolina) intended to remove the straight ticket voting option for its voters, but Michigan was unable to carry out the removal of straight ticket voting due to a court ruling. The court ruling was exogenous to the political process that enacted the statute removing the straight ticket option so it creates analytical leverage for identifying a causal effect. In medical terms one can argue that North Carolina's voters received a "treatment" in having the straight ticket option removed, while Michigan's voters served as the "control" group. Both legislatures intended to "treat" their voters, but Michigan's voters did not receive the treatment due to a legal intervention that operates independently of the political process that ordered the treatment.

Given that one set of voters received the treatment (STV removal) and one did not, it is possible to directly assess the effects of STV removal by comparing the results from Michigan and North Carolina in 2016. To do this I employed a statistical procedure known as Coarsened Exact Matching (CEM) developed by Gary King and his colleagues at Harvard University.⁴⁹ The CEM routine allowed me to identify counties in Michigan and North Carolina that had high similarity on political and socioeconomic factors such as the poverty rate, the percentage of African-American citizens, the county's vote for President Obama in 2012, and the difference in voter turnout between 2012 and 2016. Similar counties are preserved for analysis while counties in each state that do not provide a close "match" with a county in the comparison state are omitted.⁵⁰

Once the matched counties were identified the effect of the treatment, in this case STV removal, was estimated via linear regression. The dependent variable is the statewide partisan rolloff rate in 2016 and independent variables include the four variables used to match counties and an indicator variable set equal to one for Michigan counties. The results demonstrate that the average rolloff rate was approximately 2.4% lower in Michigan counties than in North Carolina counties in 2016.

In North Carolina this equates to approximately 115,000 fewer ballots being completed than would have been this case had the straight ticket option been in place. This is a non-trivial effect, as seven statewide offices in North Carolina were decided by fewer than 115,000 votes in 2016, including the governorship.

⁴⁹ See Iacus, Stefano M., Gary King, and Giuseppe Porro, (2012), "Causal Inference without Balance Checking: Coarsened Exact Matching," *Political Analysis*, 20: 1-24.

⁵⁰ North Carolina has 100 counties and Michigan has 83. For the CEM analysis 106 total counties (34 from North Carolina and 72 from Michigan) were retained for analysis.

In Michigan, implementation of a straight ticket voting ban for 2016 would have likely produced a 2.4% increase in ballot rolloff which also equates to approximately 115,000 votes. Again, this is non-trivial effect as statewide contests in Michigan are regularly decided by margins smaller than this. Examples include the contest for U.S. president in 2016 and the governing bodies of all three state universities in 2016.

To conclude this section, the results of my analysis of similar counties in Michigan and North Carolina confirms my earlier conclusion that the removal of the straight ticket voting option in Michigan would significantly increase ballot rolloff at a magnitude that is large enough to potentially affect election outcomes in the state.

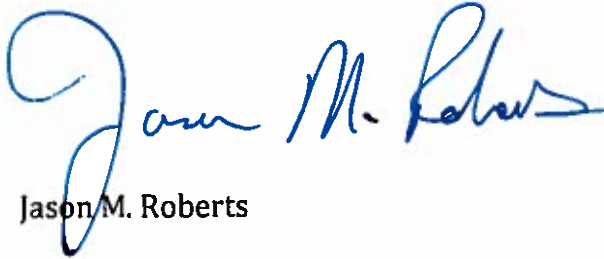
Conclusion

U.S. history is replete with examples of majority parties seeking to design a ballot that enhances their party's prospects for electoral success. Removal of the straight ticket voting option has been shown to have two major effects on election outcomes: (1) an increase in ballot rolloff or dropoff and (2) longer lines at polling places that deter voter participation in current and future elections. Removing the straight ticket option from the ballot increases the time and physical effort required to cast a ballot for many citizens of a state. Political science research has consistently shown that raising the costs of voting has a deterrent effect on voter turnout and on ballot completion.

These effects have been on clear display in North Carolina where the straight ticket option was removed prior to the 2014 election. North Carolina has conducted two general elections without the straight ticket voting option and the effects are clear: (1) the level of ballot rolloff has increased in counties that previously had high levels of straight ticket voting and (2) voter turnout has decreased for voters who live in counties that previously had high levels of straight ticket voting. Both of these observed effects disproportionately affect African American voters and both effects are consistent with findings from other studies of straight ticket voting.

Based on my analysis of the relevant data from the state of Michigan, it is my considered opinion that the proposed removal of straight ticket voting in Michigan would have similar effects to removal in other states including North Carolina. The effects include increased levels of ballot rolloff in both partisan and nonpartisan contests, as well as longer voting lines in areas that have high levels of straight ticket voting. Longer voting lines would cause a decrease in voter turnout in Michigan. Given that straight ticket voting is currently utilized at higher rates in counties with large African American populations, this reduction in voter turnout would disproportionately affect African American voters.

I declare under penalty of perjury laws of the United States that the foregoing is true and correct to the best of my knowledge.

 6-30-2017

Jason M. Roberts